

IMAGING POLARIMETER SENSOR WITH
ACHROMATIC BEAM-SPLITTING POLARIZER

ABSTRACT OF THE DISCLOSURE

5 An imaging polarimeter sensor includes an achromatic beam-splitting
polarizer that receives a polychromatic image beam of a scene and simultaneously
produces a first polarized polychromatic image beam and a second polarized
polychromatic image beam. The second polarized polychromatic image beam is
of a different polarization than the first polarized polychromatic image beam and
is angularly separated from the first polarized polychromatic image beam. The
10 achromatic beam-splitting polarizer preferably includes a Wollaston prism
through which the polychromatic image beam passes, and at least one grating
through which the polychromatic image beam passes either before or after it
passes through the Wollaston prism. An imaging detector receives the first
polarized polychromatic image beam and the second polarized polychromatic
15 image beam and produces an output image signal responsive to the first polarized
polychromatic image beam and the second polarized polychromatic image beam.